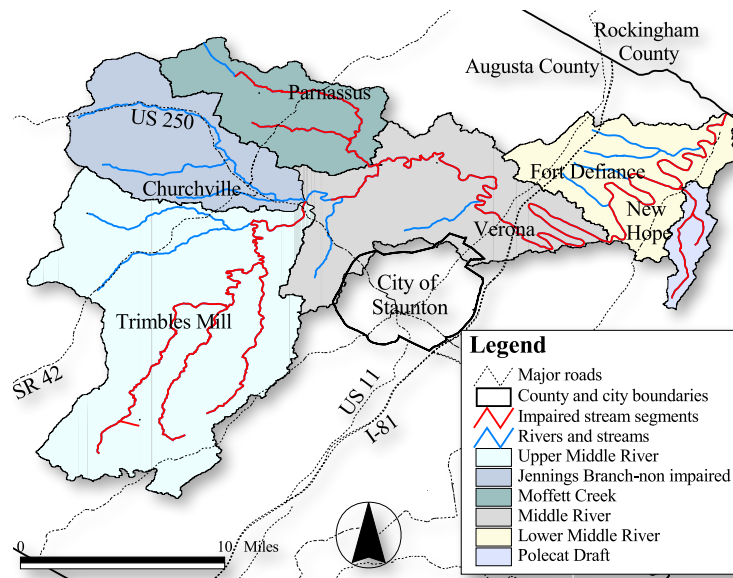


### Project Location and Background

The Middle River and its tributaries are located in Augusta County, Virginia. An implementation project to address bacteria impairments on Middle River and its tributaries, and sediment impairments in the Moffett Creek and the Upper Middle River was initiated in 2006. The VA Department of Conservation and Recreation (DCR) contracted with the Headwaters Soil & Water Conservation District and provided Water Quality Improvement Funds (WQIF) towards the project implementation. Table 1 lists BMPs implemented in the watersheds within the period of 2006 through June 2015. DCR discontinued the implementation project at the end of FY2015. BMPs were funded with state WQIF/VNRCF targeted TMDL cost-share funds. Total cost-share payments for these BMPs amounted to \$1,454,486.



### Implementation Highlights

Stream fencing practices have been installed through the USDA Conservation Reserve Enhancement Program, CRSL-6 practice (75,271 feet), and CRWP-2 practice (2,389 feet), and through TMDL fencing practices: LE-1T (21,505 feet), LE-2T (9,130 feet), and SL-6T (147,180 feet). This totals 53 miles of livestock stream exclusion fencing installed.

**Table 1.** Middle River, Moffett Creek and Polecat Draft BMP Summary: 2006-2015

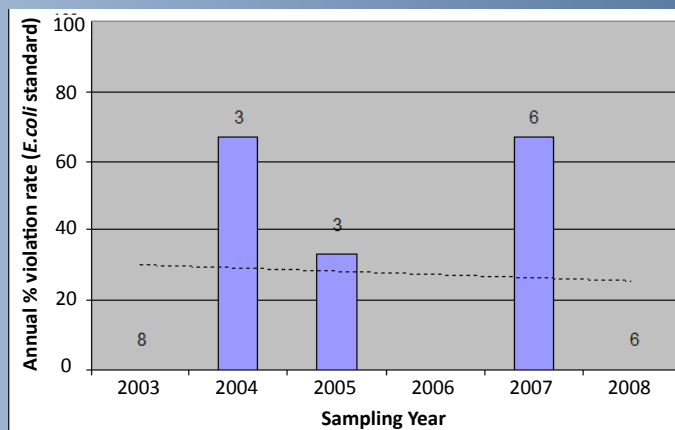
*BMP code	Units	Installed
CRFR-3	Acres	332
CRLF-1	Feet	9,611
CRSL-6	Feet	75,271
CRWP-2	Feet	2,389
FR-1	Acres	40
LE-1T	Feet	21,505
LE-2T	Feet	9,130
NM-3	Acres	1,440
SL-1	Acres	815
SL-6T	Feet	147,180
SL-7T	Acres	4
SL-8B	Acres	6,568
SL-8H	Acres	8,359
SL-11	Acres	1
WP-2	Feet	22,045
WP-4	Syst.	7
WP-4B	Syst.	1
WQ-1	Acres	11
WQ-4	Acres	472

\*For BMP code definitions, see Appendix 2 or visit the [DCR webpage](#).

### Water Quality Monitoring Results

Water quality data collected by VADEQ from 2003 through 2008 was analyzed to determine the impact of BMPs on *E. coli* violation rates and associated long term trends.

**Moffett Creek (1-BMFT001.43)**  
% Violation rates: *E. coli* standard



The bar graph shows the percent violation rate for samples collected annually that did not meet the water quality standard of 235 cfu/100 mL. The number of samples collected each year is shown above each bar. The linear regression fitted to the data shows a slight decreasing trend in violation rates over the sampling period, **indicating moderate improvement in water quality in Moffett Creek.**

**For more information, contact:**

Charlie Lunsford, VADEQ  
charlie.lunsford@deq.virginia.gov; (804) 698-4172

